



NHHPC eNews

Your source of information created by NHHPC members, for NHHPC members

Technical Needs and Collaborative Opportunities

NHHPC member organizations are encouraged to share active technical needs, partnering interests, funding opportunities, and collaborative project opportunities with other members on our [Technical Needs and Collaborative Project Opportunities web page](#).

Currently featured collaborative opportunities and technical needs are posted there and on page three of this newsletter. Also—NASA has now posted its [top human spaceflight risks and technical needs](#) on the NHHPC web site as well—check it out to see if your organization is interested in partnering with NASA on high priority research and technology development projects that advance human spaceflight.



Workshop for NHHPC Members – Innovation through Co-development: Engaging Partners, Houston TX, September 17-18

The next workshop and networking event for NHHPC members on Innovation through Co-Development: Engaging Partners will be held in Houston, TX, September 17-18. Featured keynote speakers will include Gene Kranz, the leader of the “Tiger Team” of flight directors who brought the Apollo 13 spaceship safely back to Earth speaking on “Failure is not an Option”, and Scott Parazynski—astronaut, Everest climber, physician and innovator. The program also includes a panel discussion, interactive breakout sessions, and a networking event. The networking reception will be held on the evening of Wednesday, September 17th at the BioScience Research Collaborative at Rice University campus. The day-long workshop for NHHPC members will be hosted by the Houston Technology Center in its Houston Midtown Conference Center on Thursday, September 18th.

Please save the date—more details to come!



Gene Kranz



Scott Parazynski



Houston Technology Center



NHHPC News

Welcome New Members

We are proud to announce that the NHHPC now has 146 member organizations! Please welcome our newest members:

- MCore FTS
- Smart Information Flow Technologies (SIFT)
- Waypoint 2 Space Inc.
- Taksha University
- Pfizer
- International Strategic Studies Association
- The Center for Space Medicine at Baylor College of Medicine
- BioGuard Research & Development, Inc.
- Houston Technology Center (HTC)

Let Us Help You Make Connections!

Until recently, the NHHPC Wiki has been exclusively available to NHHPC members for sharing contact information of the membership as well as to foster collaborative work on projects and ideas. Since NASA has moved to a new Content Management System, this service no longer meets our requirements for secure access. Additionally, members indicated they would rather not have a separate login for project work. As a result, we have disabled the wiki, and ask that you contact the NHHPC directly at [nasa-nhhpc@mail.nasa.gov](mailto:nhhpc@mail.nasa.gov) with inquiries regarding contact information for fellow members. This will ensure privacy of member information while still allowing you to connect directly with identified points of contact from any member organization. When you contact the NHHPC, please state which member organization you represent and the purpose for the inquiry.

We want your input!

Do you have other ideas for categories? News you want to share? Please [e-mail](#) at any time. NHHPC eNews will be collated and distributed on a quarterly basis.



Keep up-to-date on Twitter

Did you know the NHHPC is on Twitter? Follow us at [@NASAHumanHealth](https://twitter.com/NASAHumanHealth) for the latest member news, events, collaborative opportunities and updates. We have acquired over 1,000 followers over the last year! Don't miss out and stay up to date.



Collaborative Opportunities

Our [Technical Needs and Collaborative Project Opportunities web page](#) was created to feature NHHPC member organization technical needs, partnering interests, funding opportunities, and other collaborative project ideas. [Send us your input](#) for posting at any time! The following are the latest.

CASIS Offers Funding Opportunities for Space-Based Research

As manager of the International Space Station U.S. National Laboratory, the Center for the Advancement of Science in Space (CASIS) supports space-based research that improves healthcare, commercial products and the overall quality of life on Earth. CASIS accepts unsolicited proposals at any time to encourage out-of-the-box ideas from new-to-space investigators. See our website for [new funding opportunities](#) and to read information about the [unsolicited proposals process](#).



Proctor and Gamble Seeking Particle Spraying Technology

Proctor and Gamble is seeking packaging/dispensing technologies that can easily and evenly dispense 60-650 micron size irregular shape particles suspended in shear thinning fluids in a controlled fashion.

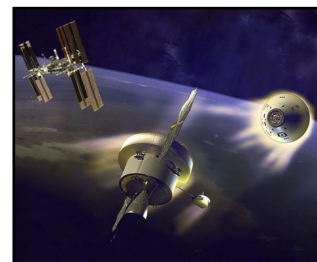
Background: Widely used trigger sprayer offers ease of use, great control of dosing and application for fluids. They work well for fluids with smaller size particles suspended, however, if the particle size is larger and/or they are irregular shaped, spraying such fluids evenly is more challenging.

We are looking for: Novel sprayer/dispenser (i.e.: trigger sprayers, pumps, press and spray, etc.) type packaging technologies/innovations to deliver/spray larger & irregular particles suspended in shear thinning fluids with precision dosing control. Deadline is April 18.



SBIR/STT TecFusion Brings Vetted Innovative Technologies to you

NASA's SBIR/STTR TecFusion is a custom Open Innovation program designed to meet your technology needs. Through the NASA SBIR/STTR TecFusion Open Innovation process you can tap into a wealth of highly creative and often breakthrough research. Rather than attending conferences and other events in hopes of surfacing a potential partnership, TecFusion will bring highly vetted technologies to your organization. Leveraging the \$2.6 billion invested annually in the SBIR/STTR Program leads to increased capability, reduced risk, lower cost, and shortened schedule for your program or project.



NASA Human Risk Technology and Research Needs

The NASA Human Research Program (HRP) investigates and mitigates the highest risks to human health and performance, providing essential countermeasures and technologies for human space exploration. Risks include physiological effects from radiation, hypogravity, and terrestrial environments, as well as unique challenges in medical support, human factors, and behavioral health support. [View the list of NASA's highest priority human risks and needs.](#)

Please contact us if you are interested in partnering with NASA on research and technology development projects in any of the areas below to advance human spaceflight.



Member News

Improved Highway Safety Delivered by App Developed for Astronauts

A custom version of SleepFit, a mobile app developed by Pulsar Informatics, Inc., has been used in a U.S. Department of Transportation (DOT) study to assess the impact of recently revised safe driving regulations for commercial truck drivers. The mobile app was developed with competitive funding from the National Space Biomedical Research Institute (NSBRI). The Institute's Space Medical and Related Technologies Commercialization Assistance Program (SMARTCAP) supports highly meritorious and innovative projects, such as SleepFit, and is managed through the NSBRI Industry Forum. "Pulsar Informatics and its collaborators at Washington State University performed one of the largest real-world studies ever conducted with commercial motor vehicle drivers," said Dr. Daniel Mollicone, CEO. The study included 106 participants and recorded 1,260 days of data and nearly 415,000 miles of driving.

"The DOT's use of a customized SleepFit is a concrete example of how research funding to improve the health and job performance of astronauts can often be applied to benefit people on Earth," said Dr. Dorit Donoviel, NSBRI deputy chief scientist and Industry Forum lead. "Astronauts must contend with irregular sleep patterns, as do workers in the transportation, energy and healthcare industries." Applications for SMARTCAP grants can be submitted year-round at www.smartcap.org.



The Conrad Foundation Hosts Innovation Summit

The [Conrad Foundation Innovation Summit](http://www.conradfoundation.org) is powered by Lockheed Martin and hosted at NASA Johnson Space Center. The Summit is the launch pad for

breakthrough technologies from the Spirit of Innovation Awards' Finalist Teams. From April 6 through April 8, students and guests will experience a competitive, yet intimate environment where leading entrepreneurs, government officials, and scientists will join in a collaborative, social forum to learn from each other and help guide the development of students' 21st century technologies.



CONRAD FOUNDATION

Space Florida and University of Central Florida partner in a Capital Acceleration Program – CAT 5 Awards

Space Florida and the University of Central Florida have partnered in a Capital Acceleration Program, namely the CAT 5 Awards. The CAT5 Awards celebrate powerful, disruptive product developments and provide Capital for the Acceleration of Technologies to early stage companies. First place winners will be awarded \$100,000 and second place winners will receive an award of \$50,000, both from Space Florida's sponsorship.

The [2014 CAT5 Awards competition](http://www.cat5awards.com) will take place on the Tuesday, June 3rd, 2014 in Orlando, Florida. The event is funded by Space Florida and the University of Central Florida Office of Research & Commercialization. Ten (10) finalists have been selected in a competitive process and are currently being put through an intense mentor and coaching program to prepare them for their presentations at the Orlando Showcase event. For more details on the program, the ten finalists and continuing progress, Space Florida POC is [Tony Gannon](http://www.tonygannon.com).



INNOVATION CONCOURSE
OF THE SOUTHEAST



NASA's Asteroid Grand Challenge Series

Member News

NASA Invites All to be an Asteroid Hunter in NASA's First Asteroid Grand Challenge Contest Series

[NASA's Asteroid Data Hunter contest series](#) will offer \$35,000 in awards over six months to citizen scientists who develop improved algorithms that can be used to identify asteroids. This contest series is being conducted in partnership with Planetary Resources Inc. of Bellevue, Wash. The first contest in the series kicked off in March. Managed by the NASA Tournament Lab, the entire contest series runs through August and is the first contest series contributing to the agency's Asteroid Grand Challenge.

The algorithm contests are managed and executed by [NASA's Center of Excellence for Collaborative Innovation \(CoECI\)](#). CoECI was established at the request of the White House Office of Science and Technology Policy to advance NASA open innovation efforts and extend that expertise to other federal agencies. CoECI uses the NASA Tournament Lab (NTL) for its advanced algorithmic and software development contests. Through its contract with Harvard Business School in association with Harvard's Institute of Quantitative Social Science, NTL uses the NHHPC member topcoder platform to enable a community of more than 600,000 designers, developers and data scientists to create the most innovative, efficient and optimized solutions for specific, real-world challenges faced by NASA.

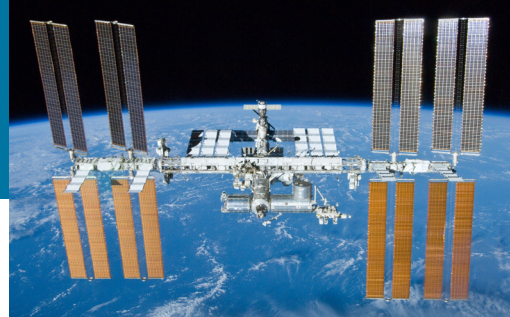


New Innovation Route-map – Start in seconds

The [Green Leader Limited](#) Route-map uses our Value-adding Integration (VAI) methodology for low cost, low risk, fast improvements and innovations to products and processes, also to facilitate better collaboration. It provides a quick overview of the main stages and activities of an innovation process from beginning to implementation, enabling the user to start in seconds on useful work. Also included is a Collaboration Recipe highlighting main ingredients for better collaboration.

The Route-map is accompanied by a series of slide/information sheets ('Tell me more about....' TMM) exploring innovation and VAI in greater detail. These sheets start simply, are quick to use and show the subtlety of VAI. The Route-map, Recipe and TMM sheets can be [downloaded from the NHHPC member news page](#). We'd love to hear your comments and suggestions. Best wishes from everyone at Green Leader Limited for your improvements and innovations.

Green Leader Limited



Member News

NHHPC members NASA, CASIS and Rice Alliance for Technology and Entrepreneurship Offer Opportunities to Advance Technologies for Life in Space and on Earth

The Rice Alliance for Technology and Entrepreneurship (Rice Alliance) of [Rice University](http://www.rice.edu) is pleased to announce that NASA's Johnson Space Center (JSC) will again offer the \$20,000 NASA Earth/Space Human Health & Performance Innovation Cash Award and the Center for the Advancement of Science in Space (CASIS) will offer a \$25,000 grant for a spaceflight opportunity on the International Space Station (ISS) National Laboratory. These prizes will help fortify the 2014 Rice Business Plan Competition (RBPC) as the world's richest and largest competition with more than \$1 million in prizes.

This is the seventh year for the \$20,000 NASA Earth/Space Human Health & Performance Innovation Cash Award. It will be granted to the team or company that presents the best business plan, with a focus on human health and performance that has application to both Earth-based activities and space exploration. "We are pleased to be partnering with the Rice Alliance to support the 2014 Rice Business Plan Competition," Dr. Jeffrey Davis said. "The competition brings business and engineering students together with industry, investors and other key members of the business community, to support the commercialization of the latest technology developments and to create new start-up companies."

Additionally, CASIS is providing a separate grant of up to \$25,000 to support potential research investigations onboard the International Space Station (ISS) U.S. National Laboratory. As a first-year sponsor for the Rice Business Plan Competition, CASIS is interested in identifying new, non-traditional space users capable

of providing experimentation to improve life on Earth. Although the two awards are complimentary, they are mutually exclusive and stand alone. "The goal of CASIS is to provide access to the U.S. National Laboratory for users who never previously considered utilizing this incredibly unique orbiting laboratory. Through our partnership with the Rice Business Plan Competition, CASIS is excited to work with and support researchers interested in taking their investigations to an environment where gravity won't hold you back" said CASIS President and Executive Director, Gregory H. Johnson.

To learn more about CASIS and additional flight opportunities, visit:

www.iss-casis.org



No Cost Tool to Run Ideation Challenge and Prize Competitions

In February 2014, the federal government launched at least 12 challenge and prize competitions. Check them out on Challenge.gov, or read about them at DIGITALGOV. The Challenge.gov team is offering a no cost tool to run ideation challenge and prize competitions. Ideation challenges can stand alone, or serve as the first phase of a multi-stage competition. Challenge.sites.usa.gov, built in WordPress, gives federal agencies a way to publicly display all the information about their crowdsourcing challenge, and then promote the page to potential solvers. Log in through OMB MAX with your user name and password, or your PIV/CAC card. It's easy to create an account if you don't have one, or re-set your password.





Member News

XArc Exploration Architecture Corporation founder and CEO featured in TEDx Talk

With space centers in Houston and potentially in Brownsville, TX, the Texas Gulf Coast is poised to become a mecca for human space exploration. XArc CEO Sam Ximenes was invited to present at a TEDx San Antonio event his vision for community participation and STEM education in the development of commercial space exploration. [View the video.](#)

Believing that it is human destiny to become a multi-planet species, Mr. Ximenes explains how the space frontier is opening up to private citizens and how interplanetary entrepreneurs are redefining the business of space. Private commercial companies are leading the way going back to the moon, and not just the moon, to asteroids to mine their resources, and to Mars, the "holy grail" for human habitation on a distant world. Private companies have already announced plans to explore and exploit the solar system. His presentation focuses on one specific destination to a place on the moon called the Marius Hills Skylight, a recently discovered large deep pit or hole in the lunar surface. It was formed from a lava tube ceiling collapse, and is the entrance to a lunar lava tube cave. Mineral resources around the area have been postulated for mining operations and the potential for long-term habitation and settlement within the protection of the lava tube are the basis for economic development of the site. In the presentation, Mr. Ximenes lays out his company's LEAP2 program, a multi-generational phased approach for developing this site beginning with robotic reconnaissance, then eventually humans exploring the cave for site assessments; an outpost construction/ mining phase, and finally the settlement phase. Citizen explorers can participate at every step of the way.



Space Florida ISS Research Competition Winners to Fly Experiments on SpaceX

Space Florida, the state's spaceport authority and aerospace development organization, and NanoRacks LLC, a designer and manufacturer of microgravity research platforms, are pleased to announce that two of the seven winners of the Space Florida International Space Station (ISS) Research Competition are scheduled to launch their payloads to the ISS onboard SpaceX CRS-3 (Commercial Resupply Services, Mission 3), from Cape Canaveral Air Force Station, set to launch on March 30. The two NanoLabs holding these payloads will fly inside the SpaceX Dragon capsule being launched on top of a Falcon 9 rocket, version 1.1. The two projects heading to the ISS are:



1. HEART FLIES (Ohio State University, Stanford-Burnham Medical Research Institute, and NASA Ames Research Center)
2. Project MERCCURI (University of California-Davis, SCISTARTER.com and ScienceCheerleader.com)



[Read the full story on spaceflorida.gov.](http://spaceflorida.gov)



Member News

GOVonomy – Innovation as A Service

GOVonomy serves the annual \$200 billion US public sector technology marketplace, which includes federal, state and local governments, law enforcement agencies, K-12 institutions, universities and college systems, non-profits and international organizations based in USA. GOVonomy's goal is to drive increased public value by regularly introducing cost-effective, cutting-edge, targeted technologies that specifically address the challenges and opportunities facing the public sector. GOVonomy connects public organizations with new technology products and productized services from startups and growth companies and helps arrange strategic discussions, demonstrations and pilots for increased understanding, education, purchasing and integration. GOVonomy also has a boutique reseller program with government schedules and a sophisticated online catalogue of growth company technology products.

GOVonomy helps the government in three ways:

- Regularly introduce a series of groundbreaking new technology products from US startups and growth companies to the government to integrate innovation in government.
- Research, assess and present new technology product solutions for government based on its specific needs, challenges, problems and opportunities.
- Facilitate creating new technology products focused on government opportunities but with no government funding or buying commitment.



Startups and growth companies can proactively showcase their products and productized services on the GOVonomy site for the public sector. Government employees and contractors can become members for free to learn about new product technology solutions. More information is available at www.govonomy.com.

Matrixx Power Suit Company Engages New Partners

The [Matrixx Power Suit Company, LLC](http://MatrixxPowerSuitCompany.LLC) has partnered with Agile Edge Technologies, an "Intelligent Analytics Company," to package their Vital Sign monitoring device with The Matrixx Patented Weighted Compression Training System, to distribute to all their client base including but not limited to Hospitals, Home Healthcare, Military, Law Enforcement, Athletes, Rehabilitation patients, the obese and overweight populations. We are currently in negotiations with a Fortune 500 Company and a Health Insurance Company to partner with The Matrixx Power Suit Co. LLC. in 2014. We are also working on finding a technology company to help in the development of our Patent Pending Custom Designed Matrixx Smart Sensor 1.0, to integrate into our revolutionary Patented Weighted Compression Garments, that can measure, assess and report changes of the vital signs of human body in real time.



Challenge.gov Wins “Innovations in American Government” Award

Harvard University's Ash Center for Democratic Governance and Innovation announced Challenge.gov as winner of the prestigious 2013 “[Innovations in American Government Award](http://InnovationsinAmericanGovernmentAward.org)” in honor of exemplary service and creativity in the public interest. Since its launch in September 2010 by the General Services Administration (GSA), Challenge.gov has become a one-stop shop where entrepreneurs and citizen solvers can find public-sector prize competitions. The website has been used by nearly 60 Federal agencies to source solutions to over 300 incentive prizes and challenges and to engage more than 42,000 citizen solvers.

